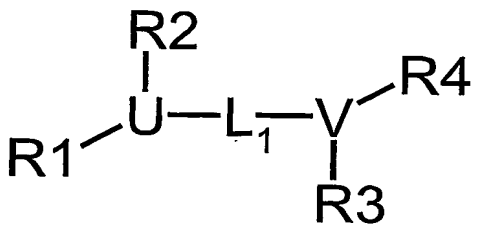
Claims:

1. A method for preventing or treating anthrax infections by inhibiting Anthrax Lethal Factor activity comprising

administering a compound of the formula:



wherein **U** and **V** are, independently, C, N, or $C(CH_3)$, **L1** is a linker and **R1**, **R2**, **R3** and **R4** are each independently selected substituent groups, as follows:

R1 is $\mathbf{Z}(CH\mathbf{R5})_n\mathbf{Y}$ where n is 0 to 4,

Z is a bond, S, CO, O, SO, SO_2, NH, N**R11**, SO_2N**R11**, N**R11**SO_2, 1,2-phenylene, 1,3-phenylene, 1,4-phenylene, 1,2-cyclohexylidene;

Y is a group known to bind to zinc, including CON**R11**OH, COOH, SH, ArSH, $NHCOCH_2SH$, 2-hydroxybenzoate (linked at the 3,4,5, or 6-position), 2-hydroxypyridinecarboxylate (linked at the 3,4,5, or 6-position, with the ring nitrogen at any unsubstituted position), $CF_2P{=}O(OH)_2$, $C(CH_3){=}NOCH_2COOH$, $C(CH_2OH){=}NOCH_2COOH$, $NHCO(CH\mathbf{R11})_mSH$ (where m = 1 to 4), $PO(OH)_2$, PO(**R11**)OH, SO_2N**R11**OH, or NH(OH)CO**R11**, or is derivatized to form a prodrug that is capable of undergoing conversion to a zinc-binding moiety,

R5 and **R11** are, independently, H, CH_3, amino, hydroxy, alkoxy, alkylthio, alkyl (C2-C10), branched alkyl (C3-C10), alkylthio (C1-C7), alkylthioalkyl (C2-C8), arylthio,

alkylamino(C1-C7), amino, arylamino, aryl, heteroaryl, arylalkyl, heterarylalkyl, arylalkenyl, heterarylalkenyl, arylalkynyl, or heterarylalkynyl,

and where **R1** can be further substituted with one or more of the following: NH_2, OH, halogen, alkyl, $CONH_2$, CONHOH, $C(NH)NH_2$, C(NH)NHOH, $NHC(NH)NH_2$, CN, NO_2, N**R6R7** where **R6** and **R7** are H or alkyl and optionally form a ring, or **R5** can form a ring with **R2** or with **R11**;

R2 is H, isobutyl, n-butyl, pentyl, methyl, alkyl (C1-C10), branched alkyl (C3-C10), cycloalkyl, cycloalkylmethyl (C3-C9 cycle), $Ar(CH_2)n$ (where n is 0 to 4, Ar is phenyl, aryl, heteroaryl), phenethyl, arylalkenyl, heterarylalkenyl, arylalkynyl, heterarylalkynyl, alkenyl (C2-C8), alkynyl (C2-C8), pentafluorophenoxyethyl, pentafluorophenylmethyl, cycloalkenyl (C4-C10), alkylthio, arylthio, alkylamino, arylamino, aryl, dichlorophenyl, or **R2** can form a ring with **R5**, **R11**, **L1**, or **R3**, and **R2**, **R5** and **R11** can be substituted with one or more of the following: NH_2, OH, halogen, alkyl, CF_3, CF_3O, CF_3S, alkoxy, alkylthio, SO_2alkyl (C1-C4), $CONH_2$, CONHOH, $C(NH)NH_2$, CN, NO_2, C(NH)NHOH, $NHC(NH)NH_2$, or N**R6R7** where **R6** and **R7** are H or alkyl and can form a ring;

R3 is H, phenethyl, alkyl (C1-C10), branched alkyl (C1-C10), aryl, phenyl substituted with aryl or heteroaryl at the 2-, 3-, or 4-positions, benzyloxy, pyrrolyl substituted with 1-2 aryl groups, 2-aryl-1,3,4 thiadiazolyl, heteroaryl (including thiophenyl), -**L2**Ar where Ar includes 1-naphthyl, 2-naphthyl, 4-phenylphenyl, 5-(2-thienyl)-2-thienyl, 4-(3'-methoxyphenyl)phenyl, 4-(4'-methoxyphenyl)phenyl, 3-indolyl, phenyl, t-butyl, indolyl 3-phenylphenyl, indolyl, 2,3-dimethyl-5-indolyl, benzothiophenyl, 4-(1,2,3-thiadiazol-4-yl)phenyl, 4-(2-thienyl)phenyl, 5-(2-pyridyl)-2-thienyl, 1-(2-napthyl)vinylaminoalkyl, N-hydroxybenzamidin-4-yl, 2-methylcarbazol-3-yl, 2-ethylcarbazol-3-yl, aryl or heteroaryl and **L2** is a linker chosen from the following, in both orientations: bond, CH_2, $(CH_2)_2$, CH_2NHCH_2, $CH_2CH_2CONHCH_2$, $CH_2CH_2CONHCH_2CH_2$, 1,1 vinylidene, 1,2-vinylidene, CO, $CH_2CH_2NHCH_2$, $CH_2CH_2CH_2NHCH_2$, $CH_2NHCH_2CH_2$, $(CH_2)q$ where q = 3 to 7, (CH**R9**)r where r = 1 to 7 and **R9** is independently H, alkyl (C1-C10), branched alkyl (C3-C10), cycloalkyl (C3-C10), cycloalkylalkyl (C4-C14), alkyl thio, amino, alkyl amino, dialkylamino,

(CH**R9**)s**X**(CH**R9**)t where s + t = 0 to 8, **X** is O, S, CO, SO, SO_2, NH, CONH, NHCO, SO_2NH, $NHSO_2$ or N**R9** and **R9** is independently H, alkyl (C1-C10), branched alkyl (C3-C10), cycloalkyl (C3-C10), cycloalkylalkyl (C4-C14), acyl, alkyl thio, amino, alkyl amino, or dialkylamino, and **R9** also includes N-linked heterocycles such as piperidine, pyrroline, (1,2,3,4-)tetahydrobetacarbolin-2yl, **R15** is H, alkyl (C1-C4), branched alkyl (C3-C5), or cycloalkyl(C3-C5), carbon-carbon single bonds in **R8** can optionally be substituted with double or triple bonds, and where **R3** can form a ring with **R2**, **L1**, or **R4**, or **R3**, **R9** and **R15** are further substituted with one or more of the following NH_2, OH, halogen, $N(CH_3)_2$, alkyl, CF_3, CF_3O, CF_3S, alkoxy, alkylthio, $CONH_2$, CONHOH, $C(NH)NH_2$, CN, NO_2, C(NH)NHOH, $NHC(NH)NH_2$, aryloxy, trifluoromethylphenyloxy, carboxyalkyl (C2-C8), (Carboxyphenyl)methylthio, carboxyalkylthio (C2-C8), carboxyphenyl, N**R6R7** where **R6** and **R7** are H or alkyl or can form a ring;

R4 is H, alkyl (C1-C10), branched alkyl (C1-C10), arylalkyl, heteroarylalkyl, CON**R10R16** where **R10** is H, methyl, alkyl (C2-C10), branched alkyl (C3-C10), benzyl, phenethyl, arylalkyl, heteroarylalkyl, alkanoyl (C2-C8), branched alkanoyl, aroyl (C6-C12), heteroaroyl (C2-C10), isopropyl,CON**R16R12**; and where **R12** and **R16** are, independently, H, methyl, alkyl, benzyl, 2-phenylethyl, 2-indanyl, 2-morpholinylethyl, (2,6)-dimethoxylbenzyl, dimethylaminoethyl, (2-pyridyl)methyl, 2-(2-pyridyl)ethyl, 4-carboxybenzyl, 1-phenylethyl, $CH(CONH_2)CH_2C_6H_5$, $CH(CONH_2)CH_2CH(CH_3)_2$, $CH(CONH_2)CH(CH_3)CH_2CH_3$, $CH(CONH_2)CHCH_3$ $CH(CH_2OCH_3)CH_2C_6H_5$, $CH(CONHCH_2CH_2OCH_3)CH_2$cyclohexyl, aryl, arylalkyl, heteroaryl, heteroarylalkyl, aminoalkyl, hydroxyalkyl, (trifluoromethylphenoxy)phenyl. N**R16R12** can optionally form an N-linked monocyclic or bicyclic heterocyclic ring, including but not limited to 1,2-dihydroisoindole, octahydroisoindole, morpholine, piperidine, piperazine, N-alkyl piperazine (C1-C4), homopiperazine, 3-pyrroline, pyrrolidine, tetrahydroisoquinoline, octahydropyrrolo[3,4-C]pyrrole, L-proline, L-proline dimethylamide, D-proline, D-proline dimethylamide, and thiazolidine, or

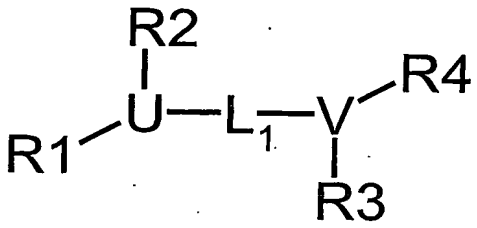
R4 can form a ring with **L1** or **R3**, and **R4**, **R6**, **R7**, **R10**, **R11**, **R12** and **R16** can be further substituted, independently, with 1 to 3 of the following substitutents: NH_2, OH, F, Cl, Br, methyl, alkyl, aryl, cycloalkyl (C3-C6), heterocycloalkyl, heteroaryl, CF_3,

CF_3O, CF_3S, CF3, aryloxy, trifluoromethylphenoxy, alkoxy, alkylthio, $CONH_2$, CN, NO_2, CONHOH, $C(NH)NH_2$, C(NH)NHOH, $NHC(NH)NH_2$, **NR6R7** where **R6** and **R7** are H or alkyl, or can form a ring; and

L1 is a linker including the following, in either orientation: single bond, double bond, CONH, NHCO, $N(CH_3)CO$, $CON(CH_3)$, CH_2NH, $NHCH_2$, $CH{=}CH$,$C(NH_2){=}N$, $N{=}C(NH_2)$, arylene (linked 1,2-; 1,3-; or 1,4), heteroarylene (linked 1,2-; 1,3-; or 1,4), ethynyl, CH=CF, CF=CH, CF=CF, CH_2CH_2, $C(CH_3){=}CH$, $CH{=}C(CH_3)$, SO_2NH, SO_2, $COCH_2$, CH_2CO, $CNOHCH_2$, CH_2CNOH, $C(CF_3){=}CH$, $CH{=}C(CF_3)$, SO_2CH_2, CH_2SO_2, $SOCH_2$, CH_2SO, CH_2CHOH, $CHOHCH_2$, lower cycloalkyl (C3-C6), or CHOHCHOH, or where **L1** can be substituted with one or more of the following: NH_2, OH, halogen, alkyl, CF_3, CF_3O, CF_3S, alkoxy, alkylthio, $CONH_2$, CONHOH, $C(NH)NH_2$, C(NH)NHOH, $NHC(NH)NH_2$, **NR6R7** where **R6** and **R7** are H or alkyl and optionally form a ring.

2. A pharmaceutical composition useful for preventing or treating anthrax infections by inhibiting Anthrax Lethal Factor activity comprising

a compound of the formula:



wherein **U** and **V** are, independently, C, N, or $C(CH_3)$, **L1** is a linker and **R1**, **R2**, **R3** and **R4** are each independently selected substituent groups, as follows:

R1 is $\mathbf{Z(CHR5)_nY}$ where n is 0 to 4,

Z is a bond, S, CO, O, SO, SO_2, NH, N**R11**, SO_2N**R11**, N**R11**SO_2, 1,2-phenylene, 1,3-phenylene, 1,4-phenylene, 1,2-cyclohexylidene;

Y is a group known to bind to zinc, including CON**R11**OH, COOH, SH, ArSH, $NHCOCH_2SH$, 2-hydroxybenzoate (linked at the 3,4,5, or 6-position), 2-hydroxypyridinecarboxylate (linked at the 3,4,5, or 6-position, with the ring nitrogen at any unsubstituted position), $CF_2P{=}O(OH)_2$, $C(CH_3){=}NOCH_2COOH$, $C(CH_2OH){=}NOCH_2COOH$, $NHCO(CHR11)_mSH$ (where m = 1 to 4), $PO(OH)_2$, PO(**R11**)OH, SO_2N**R11**OH, or NH(OH)CO**R11**, or is derivatized to form a prodrug that is capable of undergoing conversion to a zinc-binding moiety,

R5 and **R11** are, independently, H, CH_3, amino, hydroxy, alkoxy, alkylthio, alkyl (C2-C10), branched alkyl (C3-C10), alkylthio (C1-C7), alkylthioalkyl (C2-C8), arylthio, alkylamino(C1-C7), amino, arylamino, aryl, heteroaryl, arylalkyl, heterarylalkyl, arylalkenyl, heterarylalkenyl, arylalkynyl, or heterarylalkynyl,

and where **R1** can be further substituted with one or more of the following: NH_2, OH, halogen, alkyl, $CONH_2$, CONHOH, $C(NH)NH_2$, C(NH)NHOH, $NHC(NH)NH_2$, CN, NO_2, N**R6R7** where **R6** and **R7** are H or alkyl and optionally form a ring, or **R5** can form a ring with **R2** or with **R11**;

R2 is H, isobutyl, n-butyl, pentyl, methyl, alkyl (C1-C10), branched alkyl (C3-C10), cycloalkyl, cycloalkylmethyl (C3-C9 cycle), $Ar(CH_2)n$ (where n is 0 to 4, Ar is phenyl, aryl, heteroaryl), phenethyl, arylalkenyl, heterarylalkenyl, arylalkynyl, heterarylalkynyl, alkenyl (C2-C8), alkynyl (C2-C8), pentafluorophenoxyethyl, pentafluorophenylmethyl, cycloalkenyl (C4-C10), alkylthio, arylthio, alkylamino, arylamino, aryl, dichlorophenyl, or **R2** can form a ring with **R5**, **R11**, **L1**, or **R3**, and **R2**, **R5** and **R11** can be substituted with one or more of the following: NH_2, OH, halogen, alkyl, CF_3, CF_3O, CF_3S, alkoxy, alkylthio, SO_2alkyl (C1-C4), $CONH_2$, CONHOH, $C(NH)NH_2$, CN, NO_2, C(NH)NHOH, $NHC(NH)NH_2$, or N**R6R7** where **R6** and **R7** are H or alkyl and can form a ring;

R3 is H, phenethyl, alkyl (C1-C10), branched alkyl (C1-C10), aryl, phenyl substituted with aryl or heteroaryl at the 2-, 3-, or 4-positions, benzyloxy, pyrrolyl substituted with 1-2 aryl groups, 2-aryl-1,3,4 thiadiazolyl, heteroaryl (including thiophenyl), -**L2**Ar where Ar includes 1-naphthyl, 2-naphthyl, 4-phenylphenyl, 5-(2-thienyl)-2-thienyl, 4-(3'-methoxyphenyl)phenyl, 4-(4'-methoxyphenyl)phenyl, 3-indolyl, phenyl, t-butyl, indolyl 3-phenylphenyl, indolyl, 2,3-dimethyl-5-indolyl, benzothiophenyl, 4-(1,2,3-thiadiazol-4-yl)phenyl, 4-(2-thienyl)phenyl, 5-(2-pyridyl)-2-thienyl, 1-(2-napthyl)vinylaminoalkyl, N-hydroxybenzamidin-4-yl, 2-methylcarbazol-3-yl, 2-ethylcarbazol-3-yl, aryl or heteroaryl and **L2** is a linker chosen from the following, in both orientations: bond, CH_2, $(CH_2)_2$, CH_2NHCH_2, $CH_2CH_2CONHCH_2$, $CH_2CH_2CONHCH_2CH_2$, 1,1 vinylidene, 1,2-vinylidene, CO, $CH_2CH_2NHCH_2$, $CH_2CH_2CH_2NHCH_2$, $CH_2NHCH_2CH_2$, $(CH_2)q$ where q = 3 to 7, (CH**R9**)r where r = 1 to 7 and **R9** is independently H, alkyl (C1-C10), branched alkyl (C3-C10), cycloalkyl (C3-C10), cycloalkylalkyl (C4-C14), alkyl thio, amino, alkyl amino, dialkylamino, (CH**R9**)s**X**(CH**R9**)t where s + t = 0 to 8, **X** is O, S, CO, SO, SO_2, NH, CONH, NHCO, SO_2NH, $NHSO_2$ or N**R9** and **R9** is independently H, alkyl (C1-C10), branched alkyl (C3-C10), cycloalkyl (C3-C10), cycloalkylalkyl (C4-C14), acyl, alkyl thio, amino, alkyl amino, or dialkylamino, and **R9** also includes N-linked heterocycles such as piperidine, pyrroline, (1,2,3,4-)tetahydrobetacarbolin-2yl, **R15** is H, alkyl (C1-C4), branched alkyl (C3-C5), or cycloalkyl(C3-C5), carbon-carbon single bonds in **R8** can optionally be substituted with double or triple bonds, and where **R3** can form a ring with **R2**, **L1**, or **R4**, or **R3**, **R9** and **R15** are further substituted with one or more of the following NH_2, OH, halogen, $N(CH_3)_2$, alkyl, CF_3, CF_3O, CF_3S, alkoxy, alkylthio, $CONH_2$, CONHOH, $C(NH)NH_2$, CN, NO_2, C(NH)NHOH, $NHC(NH)NH_2$, aryloxy, trifluoromethylphenyloxy, carboxyalkyl (C2-C8), (Carboxyphenyl)methylthio, carboxyalkylthio (C2-C8), carboxyphenyl, N**R6R7** where **R6** and **R7** are H or alkyl or can form a ring;

R4 is H, alkyl (C1-C10), branched alkyl (C1-C10), arylalkyl, heteroarylalkyl, CON**R10R16** where **R10** is H, methyl, alkyl (C2-C10), branched alkyl (C3-C10), benzyl, phenethyl, arylalkyl, heteroarylalkyl, alkanoyl (C2-C8), branched alkanoyl, aroyl (C6-

C12), heteroaroyl (C2-C10), isopropyl,CONR16R12; and where **R12** and **R16** are, independently, H, methyl, alkyl, benzyl, 2-phenylethyl, 2-indanyl, 2-morpholinylethyl, (2,6)-dimethoxylbenzyl, dimethylaminoethyl, (2-pyridyl)methyl, 2-(2-pyridyl)ethyl, 4-carboxybenzyl, 1-phenylethyl, $CH(CONH_2)CH_2C_6H_5$, $CH(CONH_2)CH_2CH(CH_3)_2$, $CH(CONH_2)CH(CH_3)CH_2CH_3$, $CH(CONH_2)CHCH_3$ $CH(CH_2OCH_3)CH_2C_6H_5$, $CH(CONHCH_2CH_2OCH_3)CH_2$cyclohexyl, aryl, arylalkyl, heteroaryl, heteroarylalkyl, aminoalkyl, hydroxyalkyl, (trifluoromethylphenoxy)phenyl. N**R16R12** can optionally form an N-linked monocyclic or bicyclic heterocyclic ring, including but not limited to 1,2-dihydroisoindole, octahydroisoindole, morpholine, piperidine, piperazine, N-alkyl piperazine (C1-C4), homopiperazine, 3-pyrroline, pyrrolidine, tetrahydroisoquinoline, octahydropyrrolo[3,4-C]pyrrole, L-proline, L-proline dimethylamide, D-proline, D-proline dimethylamide, and thiazolidine, or

R4 can form a ring with **L1** or **R3**, and **R4**, **R6**, **R7**, **R10**, **R11**, **R12** and **R16** can be further substituted, independently, with 1 to 3 of the following substitutents: NH_2, OH, F, Cl, Br, methyl, alkyl, aryl, cycloalkyl (C3-C6), heterocycloalkyl, heteroaryl, CF_3, CF_3O, CF_3S, CF3, aryloxy, trifluoromethylphenoxy, alkoxy, alkylthio, $CONH_2$, CN, NO_2, CONHOH, $C(NH)NH_2$, C(NH)NHOH, $NHC(NH)NH_2$, N**R6R7** where **R6** and **R7** are H or alkyl, or can form a ring; and

L1 is a linker including the following, in either orientation: single bond, double bond, CONH, NHCO, $N(CH_3)CO$, $CON(CH_3)$, CH_2NH, $NHCH_2$, CH=CH,$C(NH_2)$=N, N=$C(NH_2)$, arylene (linked 1,2-; 1,3-; or 1,4), heteroarylene (linked 1,2-; 1,3-; or 1,4), ethynyl, CH=CF, CF=CH, CF=CF, CH_2CH_2, $C(CH_3)$=CH, CH=$C(CH_3)$, SO_2NH, SO_2, $COCH_2$, CH_2CO, $CNOHCH_2$, CH_2CNOH, $C(CF_3)$=CH, CH=$C(CF_3)$, SO_2CH_2, CH_2SO_2, $SOCH_2$, CH_2SO, CH_2CHOH, $CHOHCH_2$, lower cycloalkyl (C3-C6), or CHOHCHOH, or where **L1** can be substituted with one or more of the following: NH_2, OH, halogen, alkyl, CF_3, CF_3O, CF_3S, alkoxy, alkylthio, $CONH_2$, CONHOH, $C(NH)NH_2$, C(NH)NHOH, $NHC(NH)NH_2$, N**R6R7** where **R6** and **R7** are H or alkyl and optionally form a ring, together with a pharmaceutically acceptible carrier.